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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/480,390	01/11/2000	Michael P. Wagner	1956/126	4259

2101 7590 09/03/2003
BROMBERG & SUNSTEIN LLP
125 SUMMER STREET
BOSTON, MA 02110-1618

EXAMINER

TO, BAOQUOC N

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 09/03/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/480,390

Applicant(s)

WAGNER, MICHAEL P.

Examiner

Baoquoc N To

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 41-74 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 41-74 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☒ Interview Summary (PTO-413) Paper No(s). 14.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other:

DETAILED ACTION

1. Claims 1-40 are pending in this application.

Response to Arguments

2. Applicant's arguments with respect to claim 41-74 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 41-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomoda (US. Patent No. 5,706,511).

Regarding on claims 41, 51, 58 and 65, Tomoda teaches a method for providing mutual exclusion for a resource in a computer system having a plurality of processes, the method comprising:

maintaining a resource lock (lock) (col. 4, lines 26-27) for each process requiring access to the resource, the resource locking having a plurality of fields requiring initialization in order for the process to access the resource, the plurality of fields including in owner indicator field for indicating an owner process for the resource (col. 4, lines 26-27);

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receiving, by a first process (lock manager), an inquiry from a second process (management process) inquiring whether the first process owns the resource (col. 5, lines 40-42);

determining, by the first process, an owner process for the resource other than the first process (the lock manager allow the management processes lock and copies the file which also means the management is also the owner of the lock) (col. 5, lines 56-64); and

Tomoda does not explicitly teach creating a ghost lock for first process, wherein the ghost lock is a partial instantiation of a resource lock having at least the owner indicator field initialized to indicate the owner process but having less than all fields initialized, and wherein the ghost lock is maintained to facilitate future access to the resource by the first process. However, Tomoda teaches, "each management process inquires of the lock manager 23 as to whether or not the to-be-processed block is held on its own buffer before processing the transaction" (col. 5, lines 40-43). This teaches the lock is already created for the resource because the lock manager has the authority over the resource. This also teaches the limitation of a creating ghost for first process. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to include lock manager having the owner lock as taught in Tomoda in order to provide the locking mechanism to ensure there is an existed owner of the lock for a process.

Regarding on claims 42, 52, 59 and 66, Tomoda teaches determining the owner process by the first process step:

determining that the first process is not the owner process (col. 5, lines 40-47);
and

determining the thereby that the second process is the owner process (col. 5, lines 40-47).

Regarding on claims 43, 53, 60 and 67, Tomoda teaches sending, by the first process, a response to the second process indicating that the first process is not the owner process for the resource (col. 5, lines 40-47); and

creating an owner lock for the second process, wherein the owner lock is a resource locking saving all fields initialized and the owner indicator field indicating that the second process is the owner process for the resource (col. 5, lines 59-63).

Regarding on claims 44 and 68, Tomoda teaches determining, by the second process, the owner process for the resource, the owner processing being one of the second process if the second process and a third process (col. 5, lines 40-47); creating a reference lock for the second process if the third process is the owner process for the resource, wherein the owner lock is a resource locking having all fields initialized and the owner indicator field indicating that the second process is the owner process for the resource; and creating a reference lock for the second process if the third process is the

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owner process for the resource, wherein the reference lock is a resource lock having all fields initialized and the owner indicator field indicating that the third process is the owner process for the resource (col. 6, lines 59-63).

Regarding on claims 45 and 69, Tomoda teaches determining the owner process by the second process comprises:

sending, by the second process, an inquiry to the third process inquiring whether the third process owns the resource (management processes) (col. 5, lines 59-64);

receiving, by the second process, a response from the third process indicating whether the third process is the owner process for the resource (col. 5, lines 59-63); and

determining, by the second process, that the second process is the owner process for the resource, if the response indicates that the third process is not the owner process for the resource (col. 5, lines 59-63).

Regarding on claims 46 and 70, Tomoda teaches sending, by the second process (management processes), an owner notification message (inquiry) to the first process (lock manager) indicating the owner process for the resource, the owner process being one of the second process and the third process (col. 5, lines 40-47).

Regarding on claims 47, 54, 61 and 71, Tomoda teaches determining the owner process by the first process comprises:

determining the owner process for the resource based upon the owner notification message (inquiry to the manager lock) (col. 5, lines 21-26 and col. 5, lines 40-47).

Regarding on claims 48, 55, 62 and 72, Tomoda teaches determining that the first process requires access to the resource;

identifying, by the first process, the owner process for the resource using the ghost lock (lock) (col. 5, lines 40-47); and

sending, by the first process, a request message to the owner process requesting access to the resource without first sending an inquiry message to determine the owner process (col. 5, lines 40-47).

Regarding on claims 49, 56, 63 and 73, Tomoda teaches identifying the owner process for the resource using the ghost lock comprises:

finding the ghost lock among plurality of resource locks based upon a resource identifier (col. 5, lines 40-47); and obtaining the owner process from the owner indicator field of the ghost lock (col. 5, lines 40-47).

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Regarding on claims 50, 57, 64 and 74, Tomoda teaches converting the ghost lock to a reference lock by initializing all uninitialized fields of lock (col. 5, lines 59-64).

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is (703) 305-1949 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached at (703) 305-4393.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231.

The fax numbers for the organization where this application or proceeding is assigned are as follow:

- (703) 746-7238 [After Final Communication]
- (703) 746-7239 [Official Communication]
- (703) 746-7240 [Non-Official Communication]

Hand-delivered responses should be brought to:

Crystal Park II
2121 Crystal Drive
Arlington, VA 22202
Fourth Floor (Receptionist).

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Baoquoc N. To
August 21, 2003

A handwritten signature in black ink, appearing to read 'Kim Vu', with a stylized, cursive script.

KIM VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100